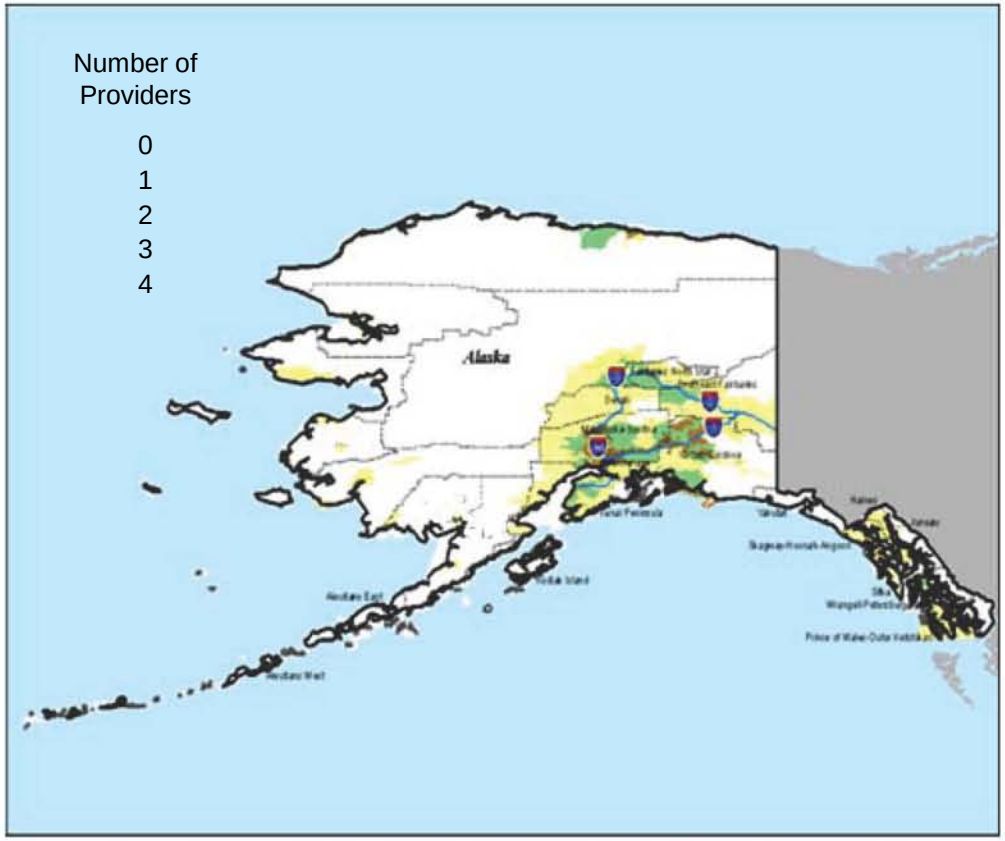
Alaska is Unique

- Enormous
  - 586,412 Square Miles, roughly 1/5 the size of the lower 48
- Limited road system
- Sparse Population
  - 698,473 residents
  - Approximately 1.2 persons per square mile, compared to 103.8 persons per square mile in the lower 48
- Rough Terrain and Climate
  - Mountains, islands, rivers, and lack of roads
  - Short construction season (May to October)
- Rural areas rely on satellite middle mile

Year-round Road System

Mobile Wireless Coverage by Number of Providers: 2009 CMRS Report



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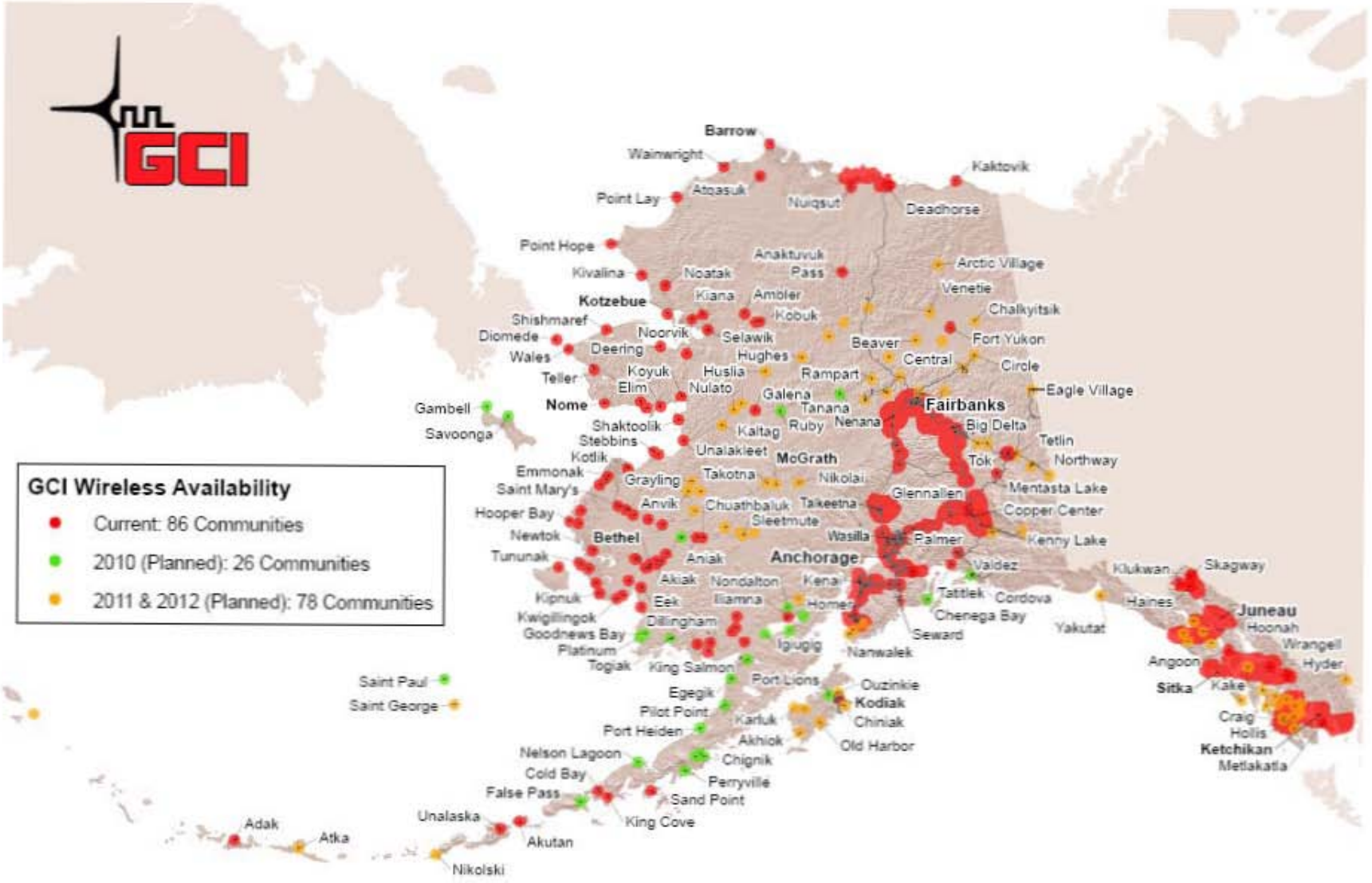
GCI: Deploying Wireless to Rural Alaska With USF Support (2007-2012)

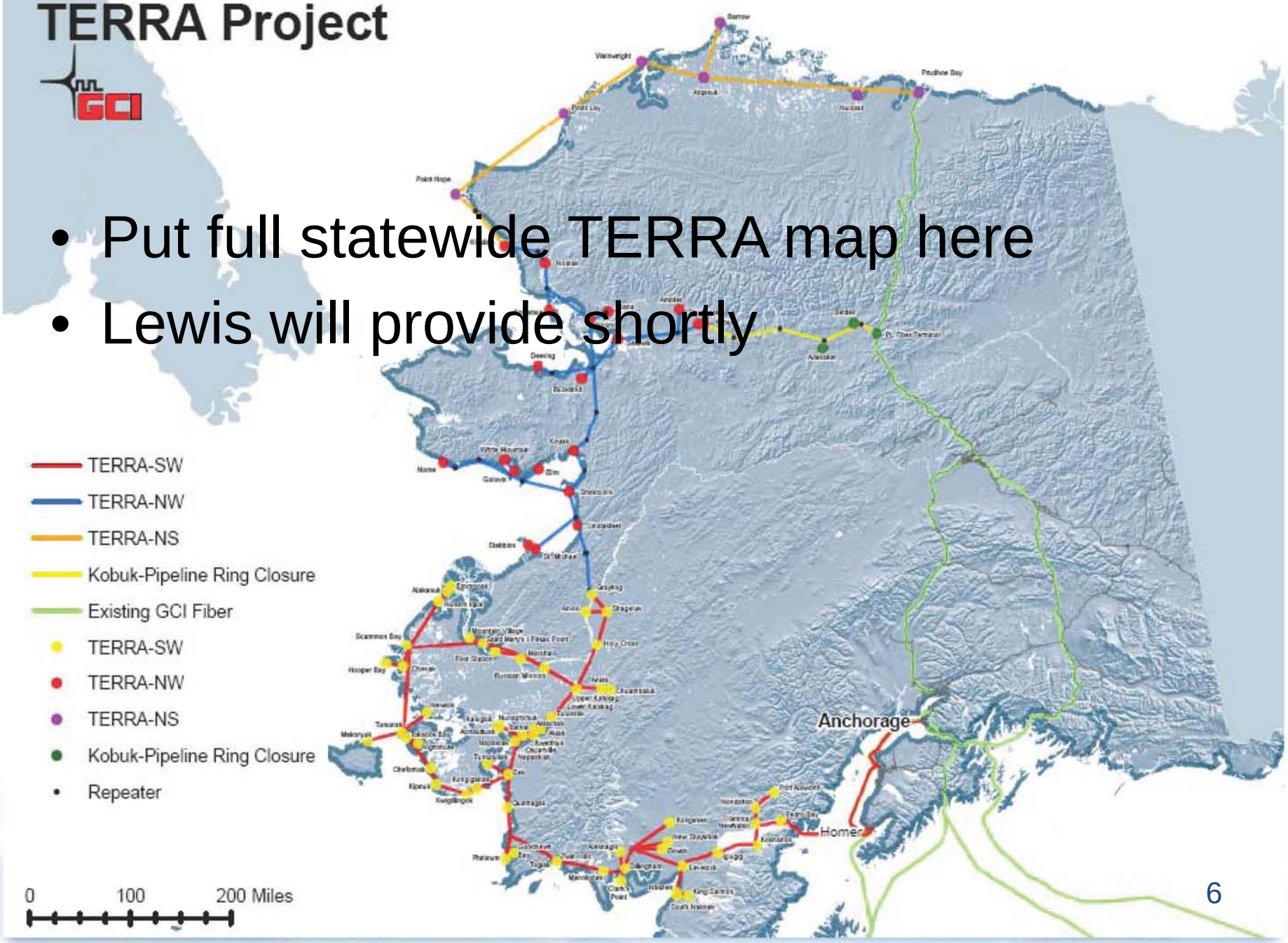


GCI, With USF Support, is Transforming Alaskan Communications

- GCI is the largest provider of telecommunication and information services in Alaska and is delivering wireless and data services and deploying infrastructure in rural areas that the incumbent market failed to provide.
- Only a statewide network can provide modern wireless networks for Alaska's rural areas and must be supported with revenues - including USF – sufficient to deploy and sustain both last and middle mile facilities.
- Through USF support, anchor tenants not only bring services to rural areas, but justify infrastructure deployment that benefits rural residents.
- Consistent with treatment of Tribal Lands under the CETC interim cap, existing Tribal Lands CETC support should track with existing ILEC support; CETCs like GCI are still at the front end of bringing comparable voice services to Tribal Lands.

TERRA Project

- Put full statewide TERRA map here
- Lewis will provide shortly



Togiak and Bethel

Village of Togiak

Bethel

Photo Credit, Bethel Aerial View, 2001, from the Community Photo Library of the Division of Community and Regional Affairs of the Alaska Department of Commerce, Community, and Economic Development.

Anaktuvuk Pass Health Clinic

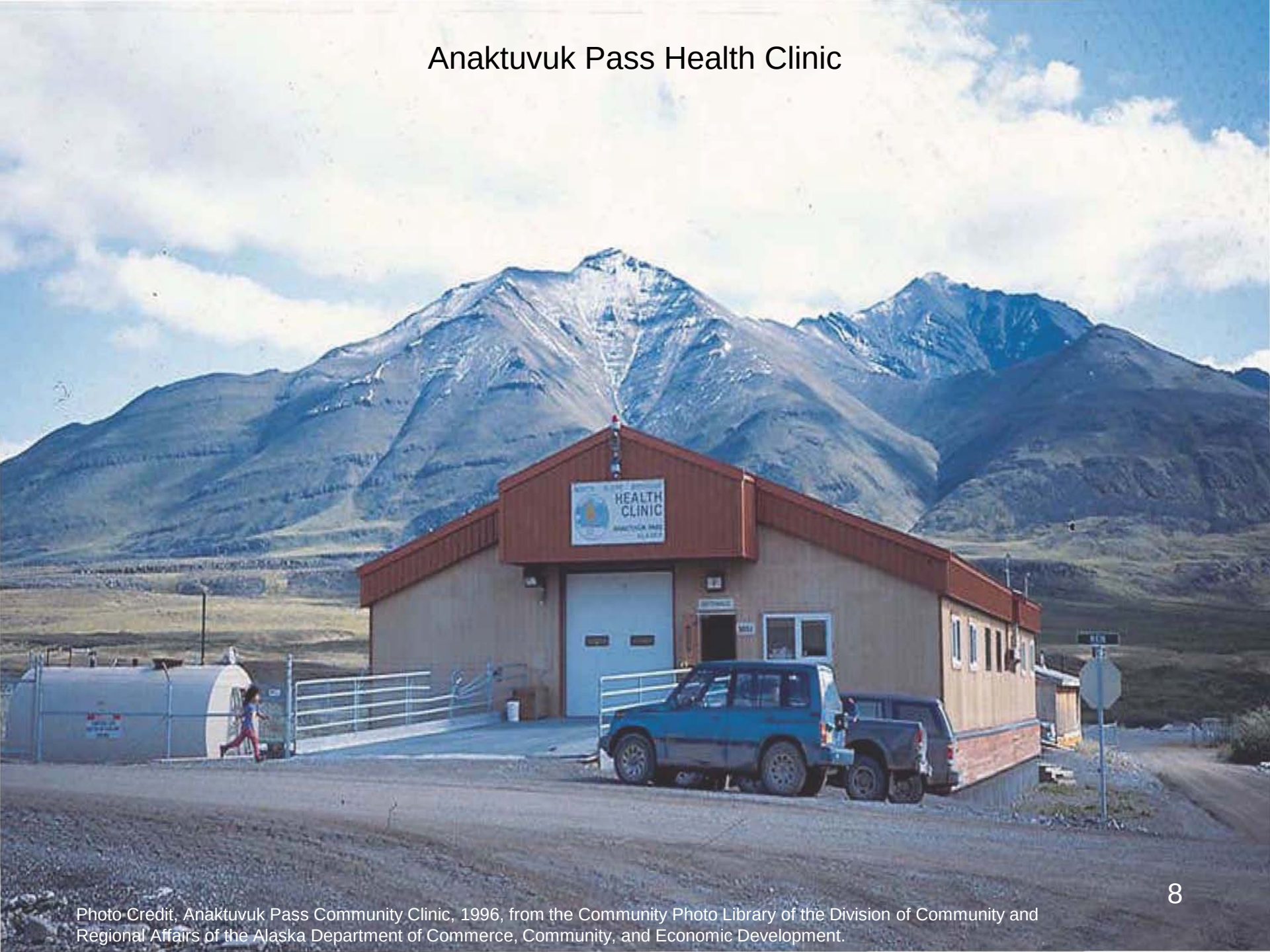


Photo Credit, Anaktuvuk Pass Community Clinic, 1996, from the Community Photo Library of the Division of Community and Regional Affairs of the Alaska Department of Commerce, Community, and Economic Development.

"I thought you would enjoy the picture attached, taken yesterday, December 1, as I made a 60-mile swing on the snowmachine trail checking out RW (rural wireless) equipment issues in "The Tundra Villages", i.e. Atmautluak, Nunapitchuk and Kasigluk. About five miles out of Atmautluak heading back to Bethel I stopped when I came across these young GCI customers who had a broken chain drive in the middle of a frozen lake. In the old days this would have been a real emergency, but the young man told me, 'No problem.' He had just used his GCI cell phone to call his dad to come give them a tow back to their house. When I snapped the picture he was on the line with his parts supplier, ordering a new drive chain so he could pick up parts in Kasigluk and hopefully fix the machine same day. The terrain in the middle of the frozen lake was flat enough that standing on the seat gave him the height he needed to complete a call. (The bushes in the picture are actually trail markers planted by Atmautluak Search and Rescue). These young people acted like it was no big deal at all. It seems that all of us in the GCI Rural Wireless projects have ushered in a paradigm shift for Bush Alaska. I stayed until their tow arrived; their dad was also a GCI Rural Wireless believer, of course."

Dan Picazo, GCI Field Maintenance Tech

GCI: Transforming Alaskan Communications Through Competition

- GCI is the largest provider of telecommunication and information services in Alaska, delivering wireless and data services and deploying infrastructure in rural areas that the incumbent market failed to provide.
- GCI has deployed statewide facilities and services through a variety of technologies.
  - Last-mile
    - Cable plant in urban areas
    - WISP networks in rural areas
    - GSM and CDMA wireless
    - UNEs for initial entry and thereafter where necessary
  - Middle-Mile
    - Combination of fiber/coax in urban areas
    - Mostly satellite in rural areas
- Competition is bringing service to rural Alaska that is reasonably comparable to the lower 48.
  - Bundled service offerings
  - Scaled business services
  - First-time wireless deployment in rural Alaska initiated in 2007

GCI and Alaska: Delivering Universal Service

- USF support to competitors has allowed GCI to improve and expand services to previously unserved areas and improve services where incumbent stagnated.
- GCI relies on all universal service programs – High Cost, Rural Healthcare, E-Rate, and Lifeline – to serve Alaska.
- Through USF support, anchor tenants such as rural healthcare facilities and schools not only bring services to rural areas, but justify infrastructure deployment that benefits rural residents.

Alaska is Unique

- Enormous
  - 586,412 Square Miles
  - the largest state in the Union and roughly 1/5 the size of the lower 48
- Sparse Population
  - 698,473 residents
  - Approximately 1.2 persons per square mile, compared to 103.8 persons per square mile in the lower 48
- Rough Terrain and Climate
  - Mountains, islands, rivers, and lack of roads
  - Short construction season (May to October)
- Limited road system

Year-round Road System

Alaskan “Urban” Communities

- Low population relative to lower 48
  - Anchorage (pop. 350K, ranked 137 nationally)
  - Fairbanks (pop. 98K, ranked 344 nationally)
  - Juneau (pop. 39K, ranked 816 nationally)
- 68% of Alaska’s population lives in urban areas
- Typically have a fiber/coax middle mile and a developed road network

Alaskan Rural Communities

- 8 Regional Centers
  - Small regional centers serve as hubs for surrounding, but still isolated villages
    - Bethel (pop. 6.5K)
    - Barrow (pop. 4K)
    - Nome (pop. 3.5K)
- Approximately 180 Villages
  - Populations are all under 1000 and many are under 100
- 32% of Alaska's population lives in rural communities
- No road access, can be reached only by plane, boat, or snow machine

Togiak and Bethel

Village of Togiak

Bethel

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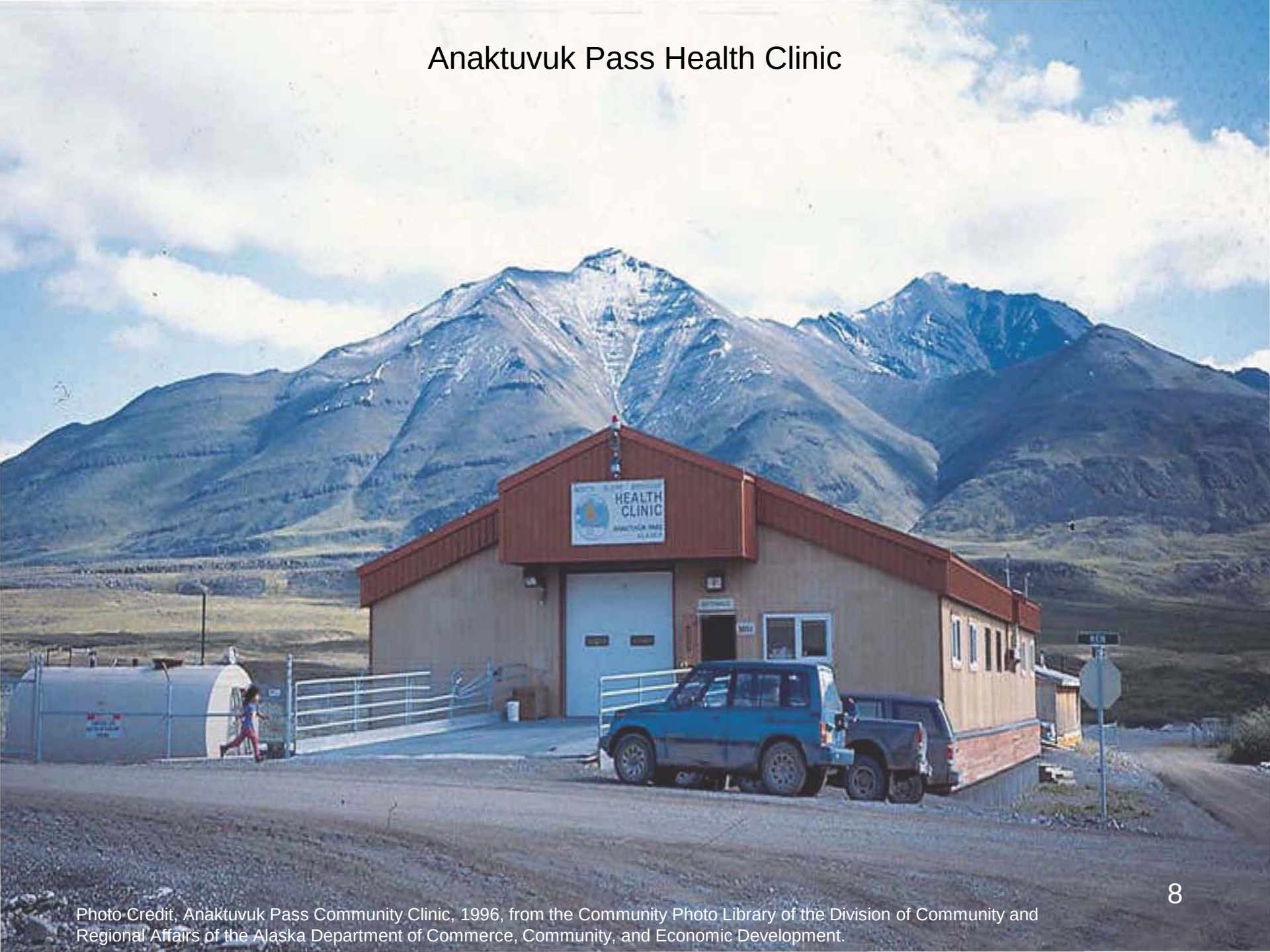

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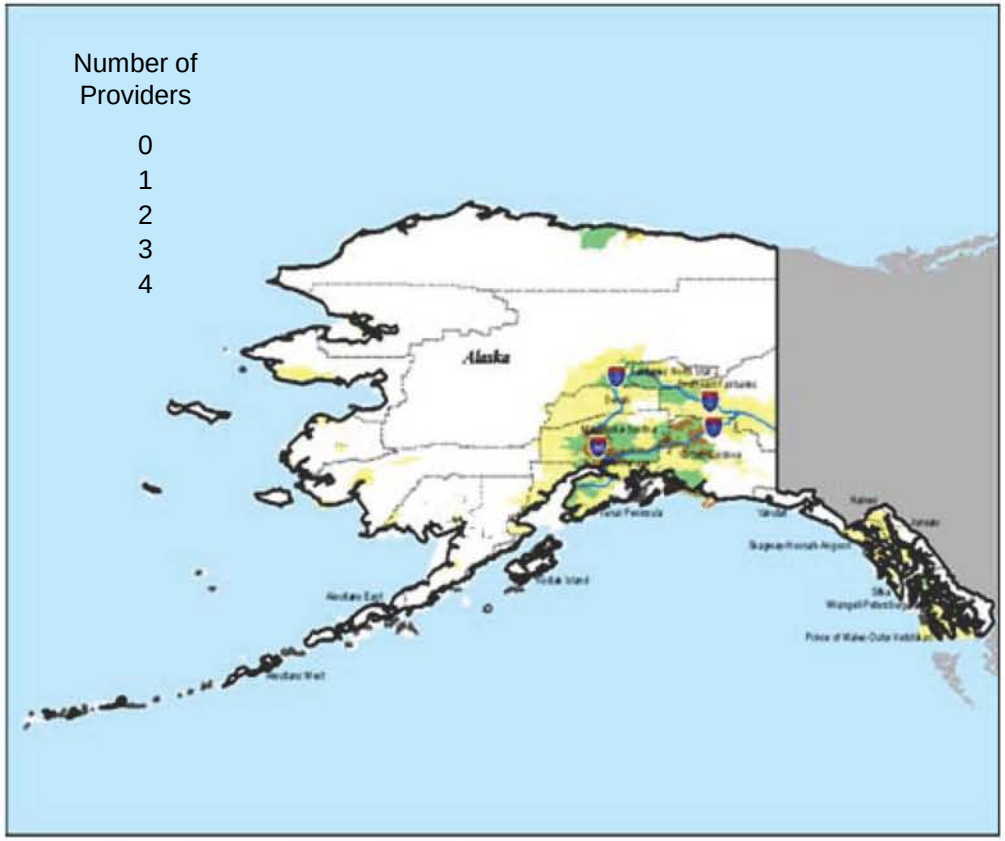

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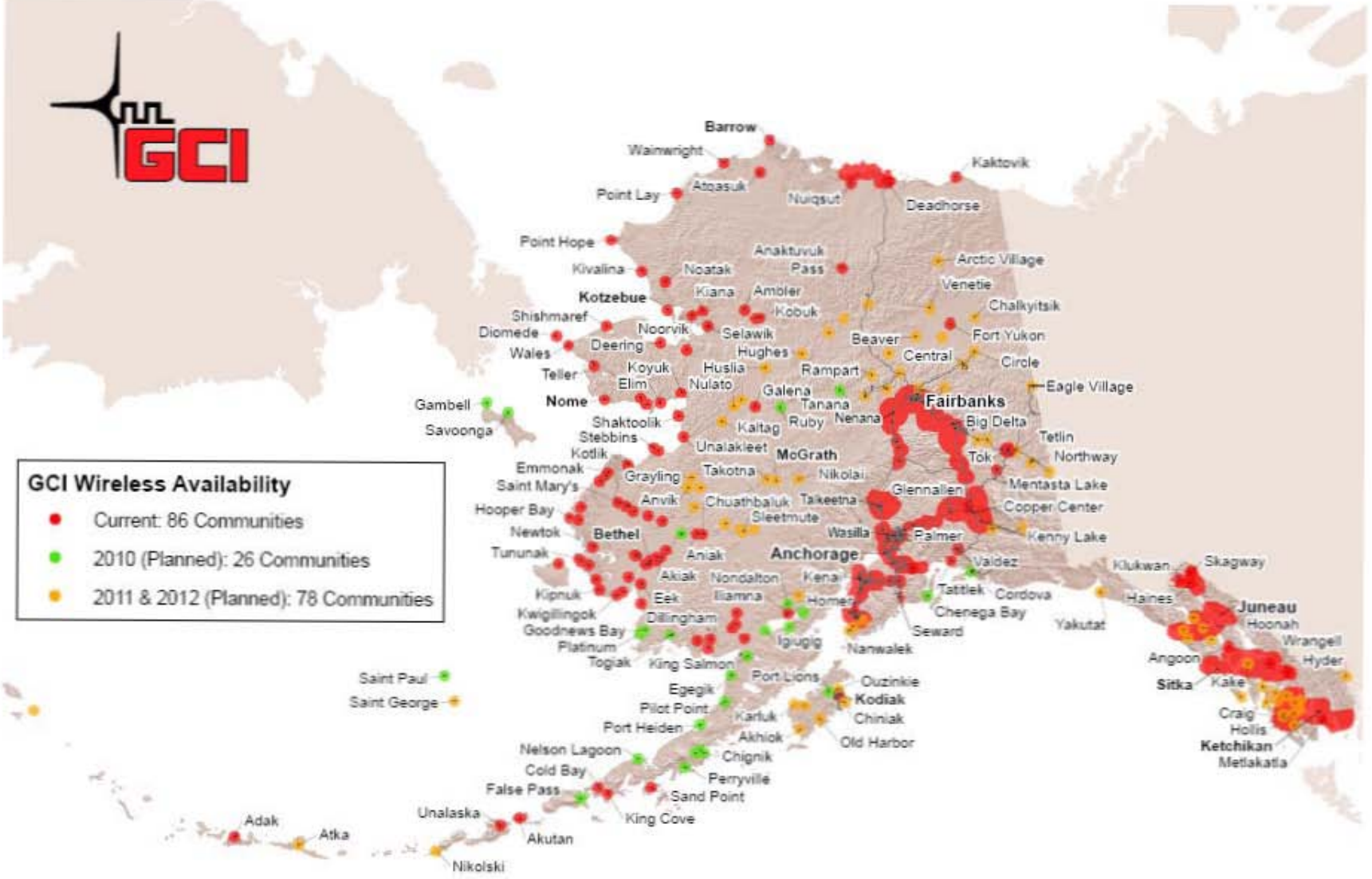

USF Remains Necessary for Statewide Deployment

- Revenues from delivery of service to end users - including USF - must support both last and middle mile deployments.
- Scale economies are critical. Modern wireless networks for Alaska's rural areas can only be provided through a statewide network.
- Modernizing and upgrading middle mile also requires statewide network design and investment.
- Consistent with treatment of Tribal Lands under the CETC interim cap, existing Tribal Lands CETC support should track with existing ILEC support; CETCs like GCI are still at the front end of bringing comparable voice services to Tribal Lands.

Tribal Lands

- The FCC has recognized that Tribal Lands are difficult to serve and that CETCs are essential to deploying comparable service.
  - Excluded CETCs serving Tribal Lands from the interim cap
- GCI could not have embarked on its rural wireless deployment for rural Alaska without the stability provided by the Tribal Lands exclusion, which remains true for current and future network investments.

GCI Infrastructure Investment

- In the past four years, GCI has invested more than $700 million in infrastructure expansion and improvement.
- In the past three years, GCI has spent more than $100 million to deploy wireless infrastructure.
- Much of that went to provide the first modern digital wireless service in rural areas.

Continuing Challenges to Expansion

- Recurring costs would exceed expected revenues in many areas without universal service support.
- Still in the midst of tackling 2G challenges in many areas of Alaska
- The lack of terrestrial middle-mile infrastructure
- Challenges in adopting 3G solutions
  - Technology choices made more difficult with the dearth of handset choices for smaller carriers
  - Ensuring roaming ability in rural Alaska, regardless of wireless technology

The Middle Mile

- The primary broadband challenge is to bring terrestrial middle-mile facilities to rural Alaska given the state's unique challenges.
- Most rural communities in Alaska rely on satellite middle-mile facilities to connect to fiber in Anchorage and the Tier 1 Internet backbone POP in Seattle.
- Satellite service is expensive, has limited throughput capacity and inherent latency and, thus, is not ideal for widespread, intensely used broadband services for the mass market.
- Satellite links cannot deliver economically feasible, urban-quality residential broadband Internet service.
- Simply cannot meet the 4 mbps downstream and 1 mbps upstream National Broadband Plan target for a majority of Alaska's rural regional centers and villages.

TERRA Project

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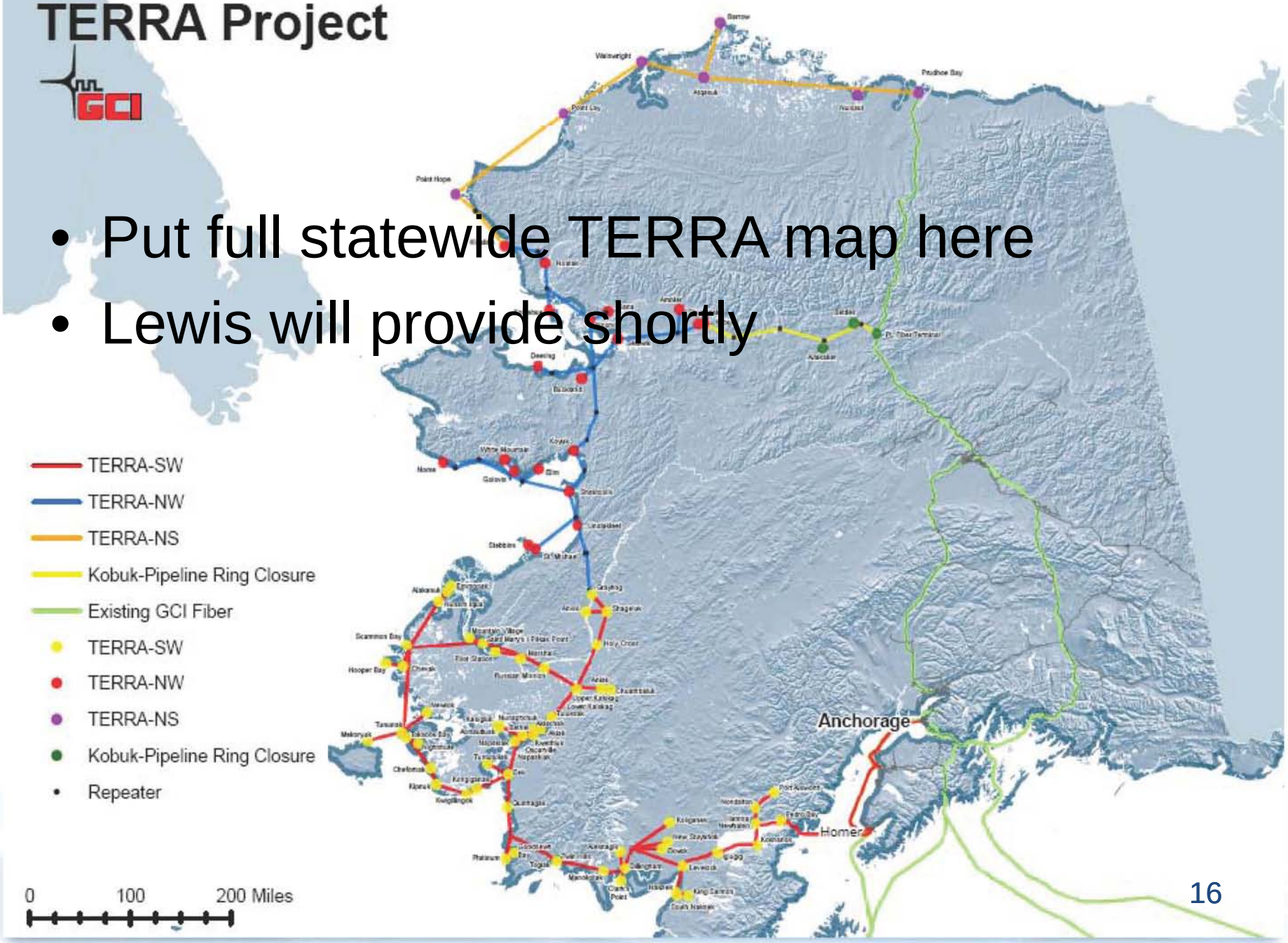
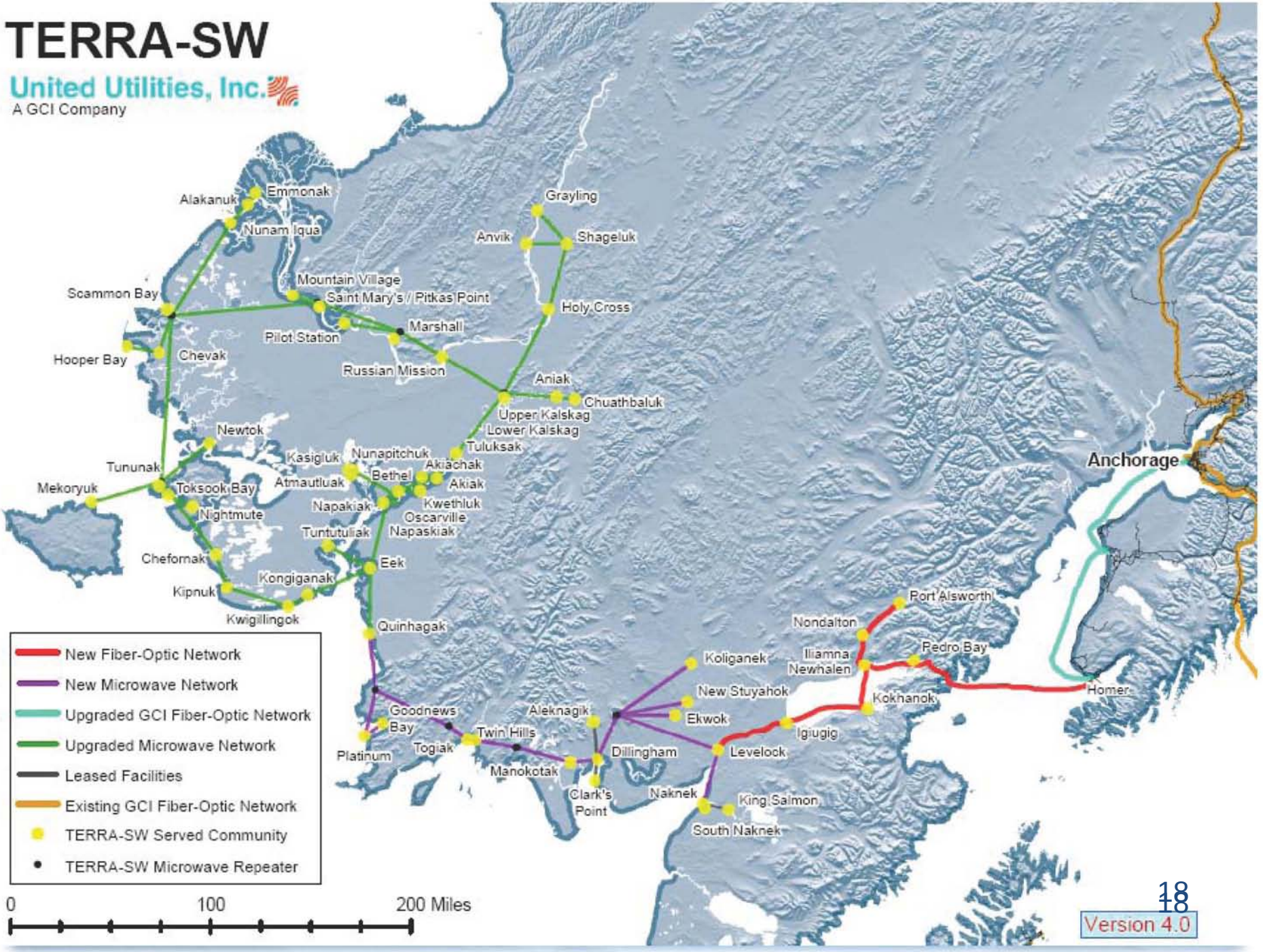


Hybrid Microwave/Fiber Facilities

- Microwave facilities provide much more capacity than satellite, but may not be able to keep up with long-term, exponential broadband demand growth.
- The cost to deploy fiber over desolate mountains and tundra in many parts of Alaska is prohibitive and access in frozen waters for timely repair is a concern.
- DeltaNet microwave solution is the prototype.
  - A high-speed terrestrial broadband network in southwest Alaska that delivers intraregion video conferencing, distance learning, and internet technologies to the people of the villages of the Yukon-Kuskokwim Delta. It also hosts mobile wireless facilities.
  - Funded by RUS DLT loan program.
- Expanding coverage with RUS Broadband Initiatives Program award.


TERRA-SW
United Utilities, Inc.
A GCI Company
Alakanuk
Emmonak
Nunam Iqua
Grayling
Anvik
Shageluk
Mountain Village
Scammon Bay
Saint Mary's / Pitkas Point
Holy Cross
Marshall
Pilot Station
Hooper Bay
Chevak
Russian Mission
Aniak
Chuathbaluk
Upper Kalskag
Lower Kalskag
Newtok
Tuluksak
Nunapitchuk
Kasigluk
Akiachak
Tununak
Bethel
Atmautluak
Akiak
Mekoryuk
Toksook Bay
Napakiak
Kwethluk
Nightmute
Oscarville
Napaskiak
Tuntutuliak
Chefornak
Eek
Kongiganak
Kipnuk
Kwigillingok
Quinhagak
Anchorage
Port Alsworth
Nondalton
Pedro Bay
Koliganek
Iliamna
Newhalen
New Stuyahok
Kokhanok
Homer
Ekwok
Igiugig
Goodnews Bay
Aleknagik
Twin Hills
Togiak
Platinum
Dillingham
Levelock
Manokotak
Clark's Point
Naknek
King Salmon
South Naknek
New Fiber-Optic Network
New Microwave Network
Upgraded GCI Fiber-Optic Network
Upgraded Microwave Network
Leased Facilities
Existing GCI Fiber-Optic Network
TERRA-SW Served Community
TERRA-SW Microwave Repeater
0
100
200 Miles
Version 4.0

Rural Health Care

- The Yukon-Kuskokwim Health Corporation ("YKHC") manages a comprehensive health care system on behalf of 58 federally recognized tribes for 50 rural communities in southwest Alaska.
  - The system includes community clinics, subregional clinics, a regional hospital, dental, optical, mental health, and environmental health services, substance abuse counseling and treatment, and health promotion and disease prevention programs.
  - Advanced high-definition video services for telepsychiatry and ophthalmology
  - Remote radiology services
  - Broadband video teleconferencing network allows medical consults with specialists, family "visits" from the village to in-patients, and professional development for staff
  - Dramatically reduced travel costs for YKHC, and freed scarce budget dollars for other uses.

Education

- The Northwest Arctic Borough School District headquartered in Kotzebue, Alaska
  - Serves approximately 37,000 square miles of territory where the villages are accessible only by small aircraft or boat.
  - E-Rate support has enabled the school district to provide high-speed Internet access and distance-learning capabilities to all schools in the district.
  - Many of the district's schools are in small villages in extremely remote locations where it is infeasible for each community to maintain even a small library with current publications and up-to-date research materials.

Small Business

- Chevak Bird and Culture Tours, in Chevak, AK (pop. 908) is a resounding success, due largely to the company's ability to reach and acquire customers throughout the world via cell phone and wireless internet (http://chevakbirdtours.com/home)